



PROSOCO, Inc. Page 1

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SAMPLES SUBMITTED	3
PURPOSE OF TEST	4-5
PRODUCTS EVALUATED	6-7
SECTION A – NEW CONSTRUCTION CLEANING	
DESCRIPTION OF PRODUCTS EVALUATED	8
TEST METHOD	8
TEST RESULTS	9-11
PHOTOGRAPHS	12-17
CONCLUSIONS	18
RECOMMENDATIONS	18
SECTION B – COLOR UNIFORMITY	
DESCRIPTION OF PRODUCTS EVALUATED	19
TEST METHOD	19
TEST RESULTS	20-23
PHOTOGRAPHS	24-25
CONCLUSIONS	26
RECOMMENDATIONS	26
SECTION C – LIMITING SURFACE ALTERATIONS	
DESCRIPTION OF PRODUCTS EVALUATED	27
TEST METHOD	27
TEST RESULTS	28
PHOTOGRAPHS	29
CONCLUSIONS	30
RECOMMENDATIONS	30
SECTION D - PROTECTIVE WATER REPELLENTS	
DESCRIPTION OF PRODUCTS EVALUATED	31
TEST METHODS	31
TEST RESULTS	32-35
PHOTOGRAPHS	36
CONCLUSIONS	37
RECOMMENDATIONS	37





PROSOCO, Inc. Page 2

SECTION E – GRAFFITI CONTROL	
DESCRIPTION OF PRODUCTS EVALUATED	38
TEST METHOD	39
TEST RESULTS	40-43
PHOTOGRAPH	44
CONCLUSIONS	45
RECOMMENDATIONS	45
SECTION F – STAIN REPELLENCY	
DESCRIPTION OF PRODUCTS EVALUATED	46
TEST METHOD	47
TEST RESULTS	48-51
PHOTOGRAPHS	52
CONCLUSIONS	53
RECOMMENDATIONS	53
SECTION G- COLOR ENHANCEMENT	
DESCRIPTION OF PRODUCTS EVALUATED	54
TEST METHODS	54
TEST RESULTS	55
PHOTOGRAPHS	55
RECOMMENDATIONS	56

#### **ATTACHMENTS**

Technical Services TECH Note RILEM Tube Test Procedures

Product Data literature for all products evaluated





PROSOCO, Inc. Page 3

FOR: Tom Lane cc: John Bourne

**SUBJECT:** Gagne & Son Concrete Block

Belgrade, ME

**DATE:** January 10, 2005

**PROJECT:** 0409-08 PTP

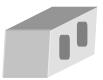
**SAMPLES SUBMITTED:** Fourteen types of split-face CMU's, three types of smooth-face CMU's, six

types of concrete pavers, and three types of split-face "keystone mini universal

caps."

Block	Name	Color	Size
Split-face CMU	"#1"	Dark Brown	4" x 8" x 16"
Split-face CMU	"#2"	Red	8" x 8" x 16"
Split-face CMU	"#3"	Green	8" x 8" x 16"
Split-face CMU	"#13"	Dark Gray	8" x 8" x 16"
Split-face CMU	"#15"	Red	4" x 8" x 16"
Split-face CMU	"#16"	Red	4" x 8" x 16"
Split-face CMU	"4/F"	Dark Brown	4" x 8" x 16"
Split-face CMU	"6P"	Brown	4" x 8" x 16"
Split-face CMU	"7G"	Brown	4" x 8" x 16"
Split-face CMU	"8D"	Dark Brown	4" x 8" x 16"
Split-face CMU	"9E"	Dark Red	4" x 8" x 16"
Split-face CMU	"11C"	Brown	4" x 8" x 16"
Split-face CMU	"12A"	Red	4" x 8" x 16"
Split-face CMU	"Natural"	Light Gray	4" x 8" x 16"
Smooth-face CMU	"#14"	Gray	4" x 8" x 16"
Smooth-face CMU	"#67"	Black	2" x 8" x 16"
Smooth-face CMU	"Regular"	Gray	4" x 8" x 16"
Keystone Mini Universal Cap	"#16 Brown"	Brown	4" x 12" x 18"
Keystone Mini Universal Cap	"#16 Charcoal"	Charcoal	4" x 12" x 18"
Keystone Mini Universal Cap	"#16 Natural"	Gray	4" x 12" x 18"
Concrete Paver	"#6 Beige"	Beige	4" x 8" x 2"
Concrete Paver	"#6 Beige & Black"	Beige/Black	4" x 8" x 2"
Concrete Paver	"#6 Charcoal"	Charcoal	4" x 8" x 2"
Concrete Paver	"#6 Natural"	Light Gray	4" x 8" x 2"
Concrete Paver	"#6 Red"	Red	4" x 8" x 2"
Concrete Paver	"#6 Sandhill"	Brown	4" x 8" x 2"





PROSOCO, Inc. Page 4

#### **PURPOSE OF TESTING:**

Fourteen types of split-face concrete masonry units (CMU's), three types of smooth-face CMU's, three types of split-face keystone mini universal caps (KMUC's), and six types of concrete pavers each with large, small and fine aggregate were submitted for testing using PROSOCO's new construction cleaning, water repellent products, and graffiti control products.

**A. Cleaning Concrete Masonry Units:** Sure Klean<sup>®</sup> Custom Masonry Cleaner and Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner were evaluated for removal of laboratory applied mortar.

To simulate new construction soiling, all concrete masonry units (CMU's) and keystone mini universal caps (KMUC's) are placed on a bench with finished surface facing upward. Hollow cylinders measuring 50 mm in diameter and 75 mm tall are positioned on top of each CMU and KMUC and filled with a wet mixture of Type S mortar. The wet, mortar-filled cylinder is allowed to remain in contact with the CMU or KMUC for 10 minutes before removal.

Heavy deposits of mortar are removed with dry scraping after 24 hours. Prepared cleaning solutions are then evaluated for their effectiveness in removing residual Type S mortar staining after 3 days, 7 days, and 14 days of curing.

**B. Color Uniformity Testing\* -** Sure Klean<sup>®</sup> Custom Masonry Cleaner and Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner were evaluated at various dilutions to determine the optimal concentration of cleaner that leaves the external surface looking most like the natural through-body color of the CMU or KMUC. Color uniformity was evaluated by comparing aggregate exposure and surface pigment alternation/removal of each cleaned surface compared to the natural through-body color of the CMU or KMUC.

<u>Aggregate Exposure</u> is the visual examination comparing aggregate exposure of the interior, through-body section of CMU or KMUC to surfaces cleaned with selected product(s) at given dilutions.

<u>Surface Pigment Alteration/Removal\*</u> is the visual examination comparing the pigmentation of the interior, through-body section of the CMU or KMUC to surfaces cleaned with selected product(s) at given dilutions.

The following is the scale used for reporting results of both categories:

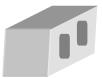
- 0 **Worst** match to through-body
- 3 Good match to through-body
- 1 **Poor** match to through-body
- 4 **Best** match to through-body
- 2 **Fair** match to through-body

#### NOTE: When cleaning integrally colored CMU.

Integrally colored concrete masonry units (CMU's) and keystone mini universal caps (KMUC's) frequently have high amounts of pigments concentrated on the surface of the cured concrete unit. Variation of surface pigment concentrations from one CMU or KMUC to the next creates a blotchy appearance in the completed wall. Allowed to remain on the surface of the CMU or KMUC, the weakly bound pigment will weather and streak, further detracting from the appearance of the completed CMU wall.

In addition to removing excess mortar and construction related soiling, the goal of any cleaning operation undertaken on an integrally colored CMU or KMUC should include removal of unnaturally high concentrations of surface pigment. By revealing the natural through-body color on the integrally colored unit, the overall color uniformity and weathering resistance of the completed CMU or KMUC wall is improved.





PROSOCO, Inc. Page 5

**C.** Limiting Surface Alterations – Sure Klean<sup>®</sup> Custom Masonry Cleaner was evaluated to determine if it created any adverse effects when used on the surface of the submitted concrete pavers. Surface Alteration was evaluated visually based upon perceived discoloration or erosion/etching of the concrete pavers.

<u>Surface Finish Removal</u> is the visual examination of the pavers comparing the surface finish of the untreated control surface to the surface finish cleaned with selected product(s) at given dilutions.

<u>Substrate Deterioration</u> is the visual examination of the pavers comparing the surface of the untreated control to surfaces cleaned with selected product(s) at given dilutions looking for any potential erosion/digestion of the paver.

<u>Color Change</u> is the visual examination comparing the color of the untreated control surface to color of surfaces cleaned with selected products at given dilutions.

<u>Staining</u> is the visual examination for changes that are the result of a chemical reaction that leaves a staining precipitate.

**D.** Protective Water Repellents – Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> and Graffiti Control and Sure Klean<sup>®</sup> Weather Seal Siloxane WB Concentrate were evaluated for their ability to provide water repellency to the submitted CMU's.

Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> and Graffiti Control was evaluated for its ability to provide water repellency to the submitted KMUC's.

Sure Klean® Paver Enhancer, Consolideck® Saltguard® WB and Stand Off® SLX100 Water & Oil Repellent were evaluated for their ability to provide water repellency to the submitted concrete pavers.

- **E. Graffiti Control** Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> and Graffiti Control was evaluated for its ability to control graffiti on the submitted CMU's and KMUC's. Sure Klean<sup>®</sup> Fast Acting Stripper and Defacer Eraser<sup>®</sup> Graffiti Wipe were evaluated for their ability to remove graffiti from the submitted CMU's and KMUC's.
- **F. Stain Repellency** Stand  $Off^{\otimes}$  SLX100 Water & Oil Repellent was evaluated for its ability to repel stains on the submitted concrete pavers.
- **G. Color Enhancement** Sure Klean<sup>®</sup> Paver Enhancer was evaluated for its ability to provide color enhancement to the submitted concrete pavers.





PROSOCO, Inc. Page 6

#### PRODUCTS EVALUATED FOR CLEANING AND COLOR UNIFORMITY

Block Type	Product	Dilution
All Submitted Split-face CMU's	Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2, 1:4, 1:6
All Submitted Smooth-face	Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2, 1:4, 1:6
CMU's	Sure Klean <sup>®</sup> Burnished Custom Masonry Cleaner	1:2, 1:3
All Submitted Split-face KMUC's	Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2, 1:4, 1:6

#### PRODUCTS EVALUATED FOR LIMITING SURFACE ALTERATIONS

Block Type	Product	Dilution	
All Submitted Concrete Pavers	Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2, 1:4, 1:6	

#### WATER REPELLENT PRODUCTS EVALUATED

Block Type Product		Dilution
All Submitted CMU's	Sure Klean <sup>®</sup> Weather Seal Blok-Guard <sup>®</sup> and Graffiti Control	Concentrate
7 till Gubrillition Give G	Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate	1:9, 1:14
All Submitted KMUC's	Sure Klean <sup>®</sup> Weather Seal Blok-Guard <sup>®</sup> and Graffiti Control	Concentrate
	Sure Klean <sup>®</sup> Paver Enhancer	Concentrate
All Submitted Concrete Pavers	Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB	Concentrate
	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	Concentrate





PROSOCO, Inc. Page 7

#### **GRAFFITI CONTROL PRODUCTS EVALUATED**

Block Type	Product	Dilution
All Submitted CMU's and KMUC's	Sure Klean <sup>®</sup> Weather Seal Blok-Guard <sup>®</sup> and Graffiti Control	Concentrate

#### **GRAFFITI REMOVAL PRODUCTS EVALUATED**

Block Type	Product	Dilution
All Submitted CMU's and KMUC's	Sure Klean <sup>®</sup> Fast Acting Stripper	Concentrate
	Defacer Eraser <sup>®</sup> Graffiti Wipe	Concentrate

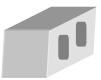
#### STAIN REPELLENT PRODUCTS EVALUATED

Block Type	Product	Dilution
All Submitted Concrete Pavers	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	Concentrate

#### **COLOR ENHANCEMENT PRODUCTS EVALUATED**

Block Type	Product	Dilution
All Submitted Concrete Pavers	Sure Klean <sup>®</sup> Paver Enhancer	Concentrate





PROSOCO, Inc. Page 8

#### **SECTION A – New Construction Cleaning**

#### **DESCRIPTION OF PRODUCTS EVALUATED**

These cleaning trials were conducted to determine the optimal cleaning/cure time combination on the submitted CMU's and KMUC's.

**Sure Klean® Custom Masonry Cleaner** – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-6 parts water. Apply by brush or low-pressure spray.

**Sure Klean® Burnished Custom Masonry Cleaner** – Removes common construction and atmospheric staining from custom masonry and other architectural concrete surfaces. This general-purpose, nonetching acidic cleaner removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the surface texture. Burnished Custom Masonry Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

### **TEST METHOD – Cleaning**

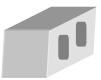
Dilution ratios refer to mixtures of parts concentrated cleaner: parts fresh water. Chemical cleaners were evaluated using the following procedure:

- 1. Prewet the surface with water.
- 2. Apply each cleaner at the appropriate dilutions.
- 3. Allow appropriate dwell time for each cleaner:

- 4. Reapply the products and moderately agitate with a brush.
- 5. Pressure rinse thoroughly.\*
- 6. Allow the surface to dry for at least 18 hours and visually examine.

<sup>\*</sup> Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.





PROSOCO, Inc. Page 9

### **TEST RESULTS – New Construction Cleaning**

### % Removal of Type S Mortar

"#1" Split-face CMU					
Product Dilution 3 day 7 day 14 day					
Custom Masonry Cleaner	1:2	100%	100%	95%	
Custom Masonry Cleaner	1:4	100%	95%	95%	
Custom Masonry Cleaner	1:6	100%	95%	95%	

"#2" Split-face CMU					
Product Dilution 3 day 7 day 14 day					
Custom Masonry Cleaner	1:2	100%	95%	95%	
Custom Masonry Cleaner	1:4	95%	95%	95%	
Custom Masonry Cleaner	1:6	95%	90%	90%	

"#3" Split-face CMU					
Product Dilution 3 day 7 day 14 day					
Custom Masonry Cleaner	1:2	100%	100%	95%	
Custom Masonry Cleaner	1:4	100%	100%	95%	
Custom Masonry Cleaner	1:6	100%	100%	95%	

"#13" Split-face CMU				
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100%	100%	100%
Custom Masonry Cleaner	1:4	100%	100%	100%
Custom Masonry Cleaner	1:6	100%	100%	100%

"#15" Split-face CMU				
Product Dilution 3 day 7 day 14 day				
Custom Masonry Cleaner	1:2	95%	95%	90%
Custom Masonry Cleaner	1:4	95%	95%	85%
Custom Masonry Cleaner	1:6	95%	90%	85%

"#16" Split-face CMU					
Product Dilution 3 day 7 day 14 day					
Custom Masonry Cleaner	1:2	95%	95%	95%	
Custom Masonry Cleaner	1:4	95%	95%	95%	
Custom Masonry Cleaner	1:6	95%	95%	85%	

"4/F" Split-face CMU					
Product Dilution 3 day 7 day 14 day					
Custom Masonry Cleaner	1:2	95%	95%	90%	
Custom Masonry Cleaner	1:4	95%	95%	90%	
Custom Masonry Cleaner	1:6	95%	95%	90%	





PROSOCO, Inc. Page 10

### **TEST RESULTS – New Construction Cleaning**

### % Removal of Type S Mortar

"6P" Split-face CMU					
Product Dilution 3 day 7 day 14 day					
Custom Masonry Cleaner	1:2	100%	100%	95%	
Custom Masonry Cleaner	1:4	95%	100%	95%	
Custom Masonry Cleaner	1:6	95%	95%	90%	

"7G" Split-face CMU					
Product Dilution 3 day 7 day 14 day					
Custom Masonry Cleaner	1:2	100%	95%	90%	
Custom Masonry Cleaner	1:4	95%	95%	90%	
Custom Masonry Cleaner	1:6	95%	95%	90%	

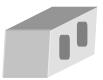
"8D" Split-face CMU					
Product Dilution 3 day 7 day 14 day					
Custom Masonry Cleaner	1:2	100%	100%	95%	
Custom Masonry Cleaner	1:4	100%	100%	95%	
Custom Masonry Cleaner	1:6	100%	95%	95%	

"9E" Split-face CMU				
Product Dilution 3 day 7 day 14 day				
Custom Masonry Cleaner	1:2	95%	95%	95%
Custom Masonry Cleaner	1:4	95%	90%	95%
Custom Masonry Cleaner	1:6	95%	90%	95%

"11C" Split-face CMU					
Product	Dilution	3 day	7 day	14 day	
Custom Masonry Cleaner	1:2	100%	100%	95%	
Custom Masonry Cleaner	1:4	100%	100%	95%	
Custom Masonry Cleaner	1:6	100%	90%	90%	

"12A" Split-face CMU				
Product	Dilution	3 day	7 day	14 day
Custom Masonry Cleaner	1:2	100%	100%	95%
Custom Masonry Cleaner	1:4	100%	100%	95%
Custom Masonry Cleaner	1:6	100%	95%	90%

"Natural" Split-face CMU					
Product	Dilution	3 day	7 day	14 day	
Custom Masonry Cleaner	1:2	100%	100%	100%	
Custom Masonry Cleaner	1:4	100%	100%	100%	
Custom Masonry Cleaner	1:6	100%	100%	100%	



PROSOCO, Inc. Page 11

### **TEST RESULTS – New Construction Cleaning**

### % Removal of Type S Mortar

"#14" Smooth-face CMU							
Product Dilution 3 day 7 day 14 da							
Custom Masonry Cleaner	1:2	100%	100%	100%			
Custom Masonry Cleaner	1:4	100%	100%	100%			
Custom Masonry Cleaner	1:6	100%	100%	100%			
Burnished Custom Masonry Cleaner	1:2	100%	100%	95%			
Burnished Custom Masonry Cleaner	1:3	100%	100%	90%			

"#67" Smooth-face CMU							
Product Dilution 3 day 7 day 14 d							
Custom Masonry Cleaner	1:2	100%	100%	100%			
Custom Masonry Cleaner	1:4	100%	100%	100%			
Custom Masonry Cleaner	1:6	100%	100%	100%			
Burnished Custom Masonry Cleaner	1:2	99%	95%	99%			
Burnished Custom Masonry Cleaner	1:3	99%	95%	95%			

"Regular" Smooth-face CMU						
Product Dilution 3 day 7 day 14 d						
Custom Masonry Cleaner	1:2	100%	100%	100%		
Custom Masonry Cleaner	1:4	100%	100%	100%		
Custom Masonry Cleaner	1:6	100%	100%	100%		
Burnished Custom Masonry Cleaner	1:2	100%	100%	95%		
Burnished Custom Masonry Cleaner	1:3	100%	100%	90%		

"#16 Brown" Split-face KMUC							
Product Dilution 3 day 7 day 14 day							
Custom Masonry Cleaner	1:2	100%	95%	95%			
Custom Masonry Cleaner	1:4	95%	90%	95%			
Custom Masonry Cleaner	1:6	95%	90%	95%			

"#16 Charcoal" Split-face KMUC							
Product Dilution 3 day 7 day 14 da							
Custom Masonry Cleaner	1:2	100%	95%	95%			
Custom Masonry Cleaner	1:4	95%	90%	90%			
Custom Masonry Cleaner	1:6	95%	85%	90%			

"#16 Natural" Split-face KMUC						
Product Dilution 3 day 7 day 14 day						
Custom Masonry Cleaner	1:2	100%	95%	100%		
Custom Masonry Cleaner	1:4	100%	95%	100%		
Custom Masonry Cleaner	1:6	100%	90%	100%		

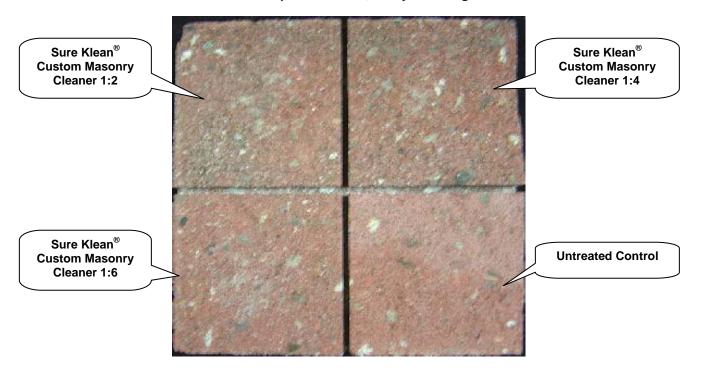




PROSOCO, Inc. Page 12

### **PHOTOGRAPHS- Cleaning**

"#15" Split-face CMU; 3 Day Cleaning



"#16 Charcoal" Split-face KMUC; 3 Day Cleaning



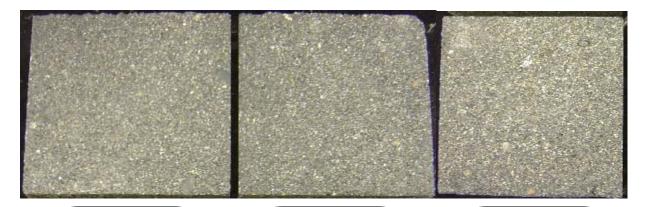




PROSOCO, Inc. Page 13

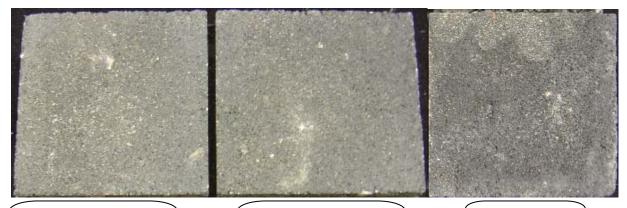
### **PHOTOGRAPHS- Cleaning**

"#67" Smooth-face CMU; 3 Day Cleaning



Sure Klean<sup>®</sup>
Custom Masonry
Cleaner 1:2

Sure Klean<sup>®</sup> Custom Masonry Cleaner 1:4 Sure Klean<sup>®</sup> Custom Masonry Cleaner 1:6



Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner 1:2 Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner 1:3

Untreated Control

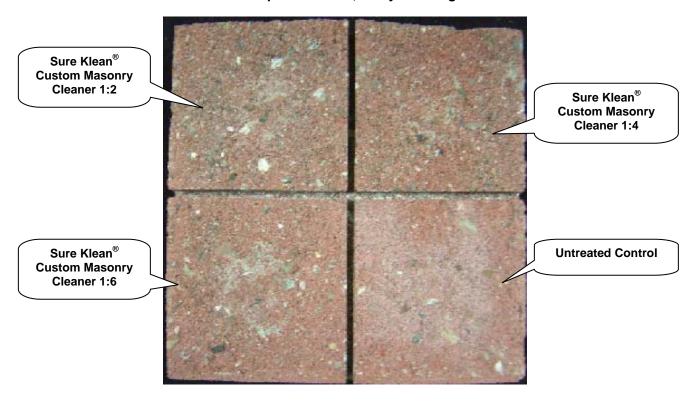




PROSOCO, Inc. Page 14

### **PHOTOGRAPHS- Cleaning**

"#15" Split-face CMU; 7 Day Cleaning



"#16 Charcoal" Split-face KMUC; 7 Day Cleaning







PROSOCO, Inc. Page 15

### **PHOTOGRAPHS- Cleaning**

"#67" Smooth-face CMU; 7 Day Cleaning



Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner 1:2 Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner 1:3

Untreated Control

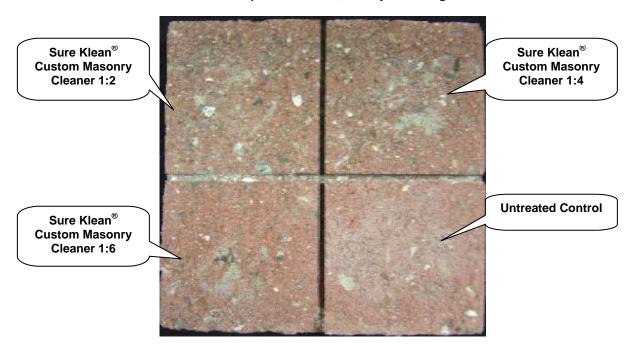




PROSOCO, Inc. Page 16

### **PHOTOGRAPHS- Cleaning**

"#15" Split-face CMU; 14 Day Cleaning



"#16 Charcoal" Split-face KMUC; 14 Day Cleaning



Masonry Cleaner 1:2

**Masonry Cleaner 1:4** 

**Masonry Cleaner 1:6** 





PROSOCO, Inc. Page 17

### **PHOTOGRAPHS- Cleaning**

"#67" Smooth-face CMU; 14 Day Cleaning



Sure Klean<sup>®</sup>
Custom Masonry
Cleaner 1:2

Sure Klean<sup>®</sup>
Custom Masonry
Cleaner 1:4

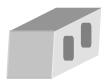
Sure Klean<sup>®</sup> Custom Masonry Cleaner 1:6



Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner 1:2 Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner 1:3

Untreated Control





PROSOCO, Inc. Page 18

#### **CONCLUSIONS – Cleaning**

Based on the test data, all of the submitted block samples were efficiently cleaned with a dilution of the selected PROSOCO Inc. cleaning product. Use higher concentrations and surface agitation to maximize aggregate exposure. Use low concentration and surface agitation to minimize aggregate exposure.

All dilutions of Sure Klean<sup>®</sup> Custom Masonry Cleaner and Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner tested affected the substrate in a similar manner, removing slight to heavy concentrations of pigmented matrix from the split-face and smooth-face blocks, exposing small and large aggregate, and enhancing the natural appearance of the integrally colored concrete masonry unit.

#### **RECOMMENDED PRODUCTS AND DILUTIONS - CLEANING**

Recommendations for cleaning for each type of CMU and KMUC submitted by Gagne & Son Concrete Block, Belgrade, ME, are provided in the chart below. Recommendations are based on the optimum dilution for complete removal of mortar.

Block	New Construction Cleaning (Type S mortar, 14 day)
"#15" Split-face CMU	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2)
"#16" Split-face CMU	Sure Klean® Custom Masonry Cleaner (1:2) OR (1:4)
"#1" Split-face CMU "#2" Split-face CMU "#3" Split-face CMU "#13" Split-face CMU "4/F" Split-face CMU "6P" Split-face CMU "7G" Split-face CMU "8D" Split-face CMU "9E" Split-face CMU "11C" Split-face CMU "11A" Split-face CMU "Natural" Split-face CMU	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2) OR (1:4) OR (1:6)
All Submitted Smooth-face CMU's	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2) OR (1:4) OR (1:6) OR  OR  Sure Klean <sup>®</sup> Burnished Custom Masonry Cleaner (1:2) OR (1:3)
All Submitted Split-face KMUC's	Sure Klean® Custom Masonry Cleaner (1:2) OR (1:4) OR (1:6)

The most appropriate cleaner and dilution should be determined on the specific job-site, and will be dependent primarily on the nature and severity of soiling present at that location. Pressure rinsing equipment providing at least 400 psi at 4-6 gpm delivered through a 15-40 degree fan spray often produces best cleaning results.

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate cleaning product and procedures for a particular project. See product literature for additional application and product information.





PROSOCO, Inc. Page 19

#### **SECTION B – COLOR UNIFORMITY:**

### **DESCRIPTION OF PRODUCTS EVALUATED – Color Uniformity:**

**Sure Klean® Custom Masonry Cleaner** – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-6 parts water. Apply by brush or low-pressure spray.

**Sure Klean® Burnished Custom Masonry Cleaner** – Removes common construction and atmospheric staining from custom masonry and other architectural concrete surfaces. This general-purpose, nonetching acidic cleaner removes rust, mud, oil, atmospheric dirt, mortar smears and other stains without altering the surface texture. Burnished Custom Masonry Cleaner adds depth to colors and brightens white matrices and exposed aggregate.

### **TEST METHOD – Color Uniformity Testing:**

Dilution ratios refer to mixtures of parts concentrated cleaner: parts fresh water. Chemical cleaners were evaluated using the following procedure:

- 1. Prewet the surface with water.
- 2. Apply each cleaner at the appropriate dilutions.
- 3. Allow appropriate dwell time, as specified.
- 4. Reapply the products and moderately agitate with a brush.
- 5. Pressure rinse thoroughly.\*
- 6. Allow the sample to dry for at least 18 hours and visually examine.
- 7. Break the sample in half and compare the through-body surfaces to the cleaned surfaces for the best match.

<sup>\*</sup>Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.





PROSOCO, Inc. Page 20

### **TEST RESULTS – Color Uniformity**

Substrate: Split-face CMU	Pigment C	Color: "#1"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	3	3
Substrate: Split-face CMU	Pigment C	Color: "#2"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	3	3
Substrate: Split-face CMU	Pigment C	Color: "#3"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	3	3
Substrate: Split-face CMU	Pigment C	Color: "#13"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	4	4
Substrate: Split-face CMU	Pigment C	Color: "#15"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	3	3
Substrate: Split-face CMU	Pigment C	Color: "#16"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	3	3

Scale used for reporting results of both categories

0 – **Worst** match to through-body

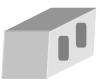
3 - Good match to through-body

1 – **Poor** match to through-body

4 - **Best** match to through-body

2 - Fair match to through-body





PROSOCO, Inc. Page 21

### **TEST RESULTS – Color Uniformity**

Custom Masonry Cleaner	Substrate: Split-face CMU	Pigment C	olor: "11C"	
Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "12A"         Surface Pigment Alteration/Remova           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Remova           Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "4/F"         Surface Pigment Alteration/Remova           Custom Masonry Cleaner         1:2         4         4           Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         4         4           Substrate: Split-face CMU         Pigment Color: "6P"           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Remova           Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "7G"           Product         Pigm	Product	Dilution		Surface Pigment Alteration/Removal
Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "12A"         "12A"           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Removal Alterat	Custom Masonry Cleaner	1:2	4	4
Substrate:         Split-face CMU         Pigment Color:         "12A"           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Removal	Custom Masonry Cleaner	1:4	4	4
Product Dilution Aggregate Exposure Alteration/Remova Alteration/R	Custom Masonry Cleaner	1:6	3	3
Custom Masonry Cleaner Product Product Pigment Color: "4/F"  Aggregate Exposure Alteration/Remova Alteratio	Substrate: Split-face CMU	Pigment C	olor: "12A"	
Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "4/F"         Surface Pigment Alteration/Remova           Custom Masonry Cleaner         1:2         4         4           Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         4         4           Custom Masonry Cleaner         1:6         4         4           Product         Pigment Color: "6P"         Surface Pigment Alteration/Remova           Custom Masonry Cleaner         1:2         4         4           Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "7G"           Product         Pigment Color: "7G"           Dilution         Aggregate Exposure         Surface Pigment Alteration/Remova           Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "8D"           Product         Pigmen	Product	Dilution		Surface Pigment Alteration/Removal
Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "4/F"           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Remova Alteration	Custom Masonry Cleaner	1:2	4	4
Substrate:       Split-face CMU       Pigment Color:       "4/F"         Product       Dilution       Aggregate Exposure       Surface Pigment Alteration/Remove Alteration	Custom Masonry Cleaner	1:4	4	4
Product  Dilution  Aggregate Exposure Alteration/Remova Alteration	Custom Masonry Cleaner	1:6	3	3
Custom Masonry Cleaner  Product Product Dilution Product Custom Masonry Cleaner  Custom Masonry Cleaner  Custom Masonry Cleaner Custom Masonry Cleaner Custom Masonry Cleaner Custom Masonry Cleaner  Custom Masonry Cleaner  Product Pigment Color: "6P"  Dilution Aggregate Exposure Alteration/Remova  Substrate: Split-face CMU Pigment Color: "7G"  Product Dilution Aggregate Exposure Alteration/Remova  Alteration/Remova  Surface Pigment Alteration/Remova  Aggregate Exposure Alteration/Remova  Custom Masonry Cleaner  1:2 4 4 4 Custom Masonry Cleaner 1:4 4 4 Custom Masonry Cleaner 1:6 3 3 Substrate: Split-face CMU Pigment Color: "8D"  Product Dilution Aggregate Exposure Alteration/Remova  Alteration/Remova	Substrate: Split-face CMU	Pigment C	olor: "4/F"	
Custom Masonry Cleaner         1:4         4         4           Substrate: Split-face CMU         Pigment Color: "6P"         Surface Pigment Alteration/Removal Alte	Product	Dilution		Surface Pigment Alteration/Removal
Custom Masonry Cleaner         1:6         4         4           Substrate: Split-face CMU         Pigment Color: "6P"           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Removal Alteration/R	Custom Masonry Cleaner	1:2	4	4
Substrate:Split-face CMUPigment Color:"6P"ProductDilutionAggregate ExposureSurface Pigment Alteration/Removal Alter	Custom Masonry Cleaner	1:4	4	4
Product  Dilution  Aggregate Exposure Alteration/Remova  Custom Masonry Cleaner  1:2  4  4  Custom Masonry Cleaner  1:4  Custom Masonry Cleaner  1:6  3  Substrate: Split-face CMU  Product  Dilution  Product  Dilution  Aggregate Exposure Alteration/Remova  Surface Pigment  Aggregate Exposure  Surface Pigment  Alteration/Remova  Alteration/Remova  Custom Masonry Cleaner  1:2  4  4  Custom Masonry Cleaner  1:4  Custom Masonry Cleaner  1:6  3  3  Substrate: Split-face CMU  Pigment Color: "8D"  Product  Pigment Color: "8D"  Product  Dilution  Aggregate Exposure  Alteration/Remova  Alteration/Remova  Alteration/Remova  Custom Masonry Cleaner  1:2  4  4  Custom Masonry Cleaner  Dilution  Aggregate Exposure Alteration/Remova	Custom Masonry Cleaner	1:6	4	4
Custom Masonry Cleaner Product Product Dilution Product Dilution Product Custom Masonry Cleaner Dilution Product Dilution Product Dilution Product Dilution Product Dilution Product Dilution Product Dilution Aggregate Exposure Surface Pigment At 4  A 4  A 4  Custom Masonry Cleaner Dilution Dilution Aggregate Exposure Alteration/Remova	Substrate: Split-face CMU	Pigment C	olor: "6P"	
Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "7G"         Surface Pigment Alteration/Removal	Product	Dilution		Surface Pigment Alteration/Removal
Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "7G"           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Removal Alteration/R	Custom Masonry Cleaner	1:2	4	4
Substrate:         Split-face         CMU         Pigment Color:         "7G"           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Removal Alt	Custom Masonry Cleaner	1:4	4	4
Product  Dilution  Aggregate Exposure  Surface Pigment Alteration/Remova  Custom Masonry Cleaner  1:2  4  4  Custom Masonry Cleaner  1:4  4  Custom Masonry Cleaner  1:6  3  3  Substrate: Split-face CMU  Pigment Color: "8D"  Product  Dilution  Aggregate Surface Pigment Alteration/Remova  Aggregate Exposure  Custom Masonry Cleaner  1:2  4  4  Custom Masonry Cleaner  1:2  4  4  Custom Masonry Cleaner  1:4  4  Custom Masonry Cleaner  1:4  4  Custom Masonry Cleaner  1:4  4	Custom Masonry Cleaner	1:6	3	3
Dilution   Exposure   Alteration/Removal	Substrate: Split-face CMU	Pigment C	olor: "7G"	
Custom Masonry Cleaner         1:4         4         4           Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "8D"           Product         Dilution         Aggregate Exposure Alteration/Removation/Removation         Surface Pigment Alteration/Removation           Custom Masonry Cleaner         1:2         4         4           Custom Masonry Cleaner         1:4         4         4	Product	Dilution		Surface Pigment Alteration/Removal
Custom Masonry Cleaner         1:6         3         3           Substrate: Split-face CMU         Pigment Color: "8D"           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Removal Alteration/R	Custom Masonry Cleaner	1:2	4	4
Substrate:         Split-face         CMU         Pigment Color:         "8D"           Product         Dilution         Aggregate Exposure         Surface Pigment Alteration/Removal           Custom Masonry Cleaner         1:2         4         4           Custom Masonry Cleaner         1:4         4         4	Custom Masonry Cleaner	1:4	4	4
Product  Dilution  Aggregate Exposure  Alteration/Remove  Custom Masonry Cleaner  1:2  4  4  Custom Masonry Cleaner  1:4  4  4	Custom Masonry Cleaner	1:6	3	3
Product Dilution Aggregate Exposure Alteration/Remova  Custom Masonry Cleaner 1:2 4 4 Custom Masonry Cleaner 1:4 4 4	Substrate: Split-face CMU	Pigment C	color: "8D"	•
Custom Masonry Cleaner 1:4 4 4	·		Aggregate	Surface Pigment Alteration/Removal
	Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner 1:6 3 3	Custom Masonry Cleaner	1:4	4	4
	Custom Masonry Cleaner	1:6	3	3

Scale used for reporting results of both categories

0 – **Worst** match to through-body

3 - Good match to through-body

1 – **Poor** match to through-body

4 – **Best** match to through-body

2 – **Fair** match to through-body





PROSOCO, Inc. Page 22

### **TEST RESULTS – Color Uniformity**

Substrate: Split-face CMU	Pigment	Color: "9E"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	3	3
Substrate: Split-face CMU	Pigment	Color: "Natural"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	3	3
Substrate: Split-face CMU	Pigment	Color: "#14"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	4	4
Burnished Custom Masonry Cleaner	1:2	3	3
Burnished Custom Masonry Cleaner	1:3	3	3
Substrate: Split-face CMU	Pigment	Color: "#67"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	3	3
Custom Masonry Cleaner	1:4	3	3
Custom Masonry Cleaner	1:6	3	3
Burnished Custom Masonry Cleaner	1:2	4	4
Burnished Custom Masonry Cleaner	1:3	4	4
Substrate: Split-face CMU	Pigment	Color: "Regular"	
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal
Custom Masonry Cleaner	1:2	4	4
Custom Masonry Cleaner	1:4	4	4
Custom Masonry Cleaner	1:6	4	4
Burnished Custom Masonry Cleaner	1:2	3	3
Burnished Custom Masonry Cleaner	1:3	3	3

Scale used for reporting results of both categories

0 – **Worst** match to through-body

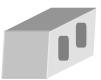
3 - Good match to through-body

1 – **Poor** match to through-body

4 – **Best** match to through-body

2 – **Fair** match to through-body





PROSOCO, Inc. Page 23

### **TEST RESULTS – Color Uniformity**

Substrate: Split-face CMU	Pigment	Pigment Color: "#16 Brown"				
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal			
Custom Masonry Cleaner	1:2	4	4			
Custom Masonry Cleaner	1:4	4	4			
Custom Masonry Cleaner	1:6	4	4			
Substrate: Split-face CMU	Pigment	Color: "#16 Chard	oal"			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal			
Custom Masonry Cleaner	1:2	4	4			
Custom Masonry Cleaner	1:4	4	4			
Custom Masonry Cleaner	1:6	4	4			
Substrate: Split-face CMU	Pigment	Color: "#16 Natura	al"			
Product	Dilution	Aggregate Exposure	Surface Pigment Alteration/Removal			
Custom Masonry Cleaner	1:2	4	4			
Custom Masonry Cleaner	1:4	4	4			
Custom Masonry Cleaner	1:6	4	4			

Scale used for reporting results of both categories

0 – **Worst** match to through-body

3 – **Good** match to through-body

1 – **Poor** match to through-body

4 - **Best** match to through-body

2 – **Fair** match to through-body





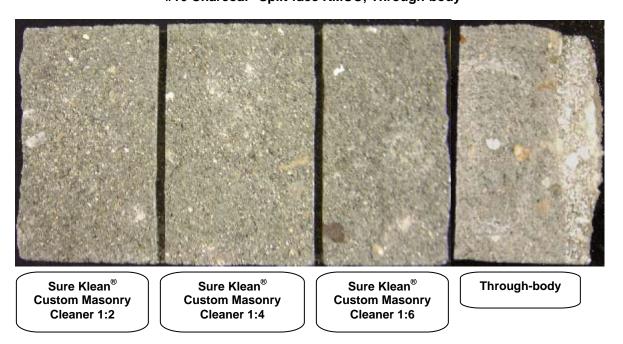
PROSOCO, Inc. Page 24

### **PHOTOGRAPHS – Color Uniformity**

"#15" Split-face CMU; Through-body



"#16 Charcoal" Split-face KMUC; Through-body



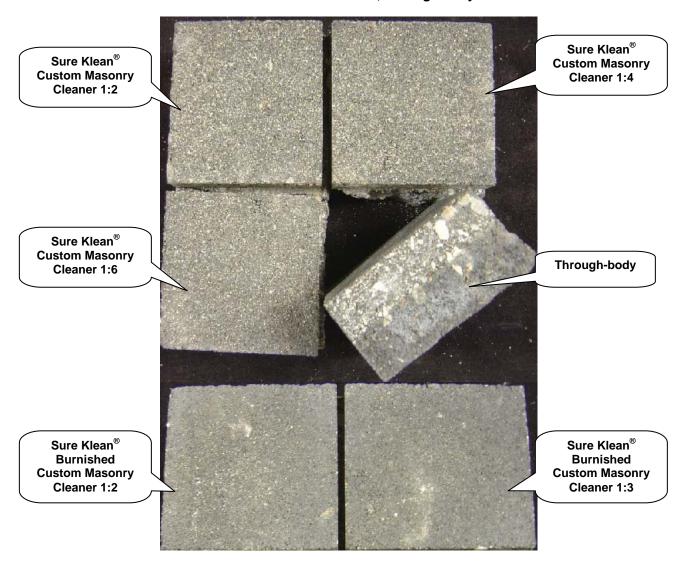




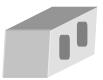
PROSOCO, Inc. Page 25

### **PHOTOGRAPHS – Color Uniformity**

"#67" Smooth-face CMU; Through-body







PROSOCO, Inc. Page 26

#### CONCLUSIONS: COLOR UNIFORMITY:

Most dilutions of Sure Klean<sup>®</sup> Custom Masonry Cleaner and Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner tested affected the substrate in a similar manner. Higher concentrations of cleaner removed moderate to heavy concentrations of pigmented matrix, exposing small and large aggregate. Lower concentrations of cleaner removed slight to moderate concentrations of pigmented matrix, exposing small and large aggregate. All dilutions enhanced the natural appearance of the integrally colored CMU's and KMUC's.

#### **RECOMMENDATIONS - COLOR UNIFORMITY**

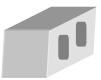
Recommendations for color uniformity for each type of CMU and KMUC submitted by Gagne & Son Concrete Block, Belgrade, ME, are provided in the chart below. Recommendations are based on the optimum dilution that provides the best color uniformity.

Block	Color Uniformity
"#15" Split-face CMU	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2)
"#16" Split-face CMU	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2) OR (1:4)
"#1" Split-face CMU "#2" Split-face CMU "#3" Split-face CMU "#13" Split-face CMU "4/F" Split-face CMU "6P" Split-face CMU "7G" Split-face CMU "8D" Split-face CMU "8D" Split-face CMU "9E" Split-face CMU "11C" Split-face CMU "11A" Split-face CMU "12A" Split-face CMU	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2) OR (1:4) OR (1:6)
All Submitted Smooth-face CMU's	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2) OR (1:4) OR (1:6) OR Sure Klean <sup>®</sup> Burnished Custom Masonry Cleaner (1:2) OR (1:3)
All Submitted Split-face KMUC's	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2) OR (1:4) OR (1:6)

The most appropriate cleaner and dilution should be determined on the specific job-site, and will be dependent primarily on the nature and severity of soiling present at that location. Pressure rinsing equipment providing at least 400 psi at 4-6 gpm delivered though a 15-40 degree fan spray often produces best cleaning results.

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate cleaning product and procedures for a particular project. See product literature for additional application and product information.





PROSOCO, Inc. Page 27

### **SECTION C – LIMITING SURFACE ALTERATIONS**

### **DESCRIPTION OF PRODUCTS EVALUATED – Limiting Surface Alterations**

**Sure Klean® Custom Masonry Cleaner** – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-6 parts water. Apply by brush or low-pressure spray.

### **TEST METHOD – Limiting Surface Alterations:**

Dilution ratios refer to mixtures of concentrated cleaner: fresh water. Chemical cleaners were evaluated using the following procedure:

- 1. Prewet the surface with water.
- 2. Apply the cleaner.
- 4. Pressure rinse thoroughly. \*

<sup>\*</sup> Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.





PROSOCO, Inc. Page 28

### **TEST RESULTS – Limiting Surface Alterations**

Substrate: Concrete Paver	Pigment Color: "#6 Beige"				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2	3	0	0	0
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:4	3	0	0	0
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	1	0	0	0
Substrate: Concrete Paver	Pigment Color: "#6 Beige & Black"				
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2	3	0	0	0
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:4	3	0	0	0
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	2	0	0	0
Substrate: Concrete Paver	Pigment	Color: "#6 Chard	coal"		
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2	3	0	0	0
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:4	3	0	0	0
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	2	0	0	0
Substrate: Concrete Paver	Pigment	Color: "#6 Natur	al"		
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:2	2	0	0	0
0 1/1® 0	4.4	•	0	_	
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:4	2	0	0	0
Sure Klean® Custom Masonry Cleaner  Sure Klean® Custom Masonry Cleaner	1:4	2	0	0	0
	1:6				
Sure Klean <sup>®</sup> Custom Masonry Cleaner	1:6	2			
Sure Klean® Custom Masonry Cleaner  Substrate: Concrete Paver	1:6	2 Color: "#6 Red" Surface Finish	0 Substrate	0 Color	0
Sure Klean® Custom Masonry Cleaner  Substrate: Concrete Paver  Product	1:6 Pigment Dilution	2 Color: "#6 Red" Surface Finish Removal	0 Substrate Deterioration	0 Color Change	0 Staining
Sure Klean® Custom Masonry Cleaner  Substrate: Concrete Paver  Product  Sure Klean® Custom Masonry Cleaner	1:6 Pigment Dilution 1:2	2 Color: "#6 Red" Surface Finish Removal 3	Substrate Deterioration 0	Color Change	0 Staining 0
Sure Klean® Custom Masonry Cleaner  Substrate: Concrete Paver  Product  Sure Klean® Custom Masonry Cleaner  Sure Klean® Custom Masonry Cleaner	1:6  Pigment  Dilution  1:2  1:4  1:6	2 Color: "#6 Red" Surface Finish Removal 3 2	Substrate Deterioration 0 0 0	Color Change 0	O Staining O O
Sure Klean® Custom Masonry Cleaner  Substrate: Concrete Paver  Product  Sure Klean® Custom Masonry Cleaner  Product	1:6  Pigment  Dilution  1:2  1:4  1:6	2 Color: "#6 Red" Surface Finish Removal 3 2 1	Substrate Deterioration 0 0 0	Color Change 0	O Staining O O
Sure Klean® Custom Masonry Cleaner  Substrate: Concrete Paver  Product  Sure Klean® Custom Masonry Cleaner  Product  Product  Sure Klean® Custom Masonry Cleaner	1:6 Pigment Dilution 1:2 1:4 1:6 Pigment	2 Color: "#6 Red" Surface Finish Removal 3 2 1 Color: "#6 Sand Surface Finish	Substrate Deterioration 0 0 0 hill" Substrate	Color Change 0 0	Staining 0 0 0
Sure Klean® Custom Masonry Cleaner  Substrate: Concrete Paver  Product  Sure Klean® Custom Masonry Cleaner  Product	1:6 Pigment Dilution 1:2 1:4 1:6 Pigment Dilution	2 Color: "#6 Red" Surface Finish Removal 3 2 1 Color: "#6 Sandl Surface Finish Removal	Substrate Deterioration 0 0 0 hill" Substrate Deterioration	Color Change 0 0 0	Staining  0  0  0  Staining

0 – No change

3 - change - heavy

1 – change – slight

4 - change - excessive

2 - change - moderate

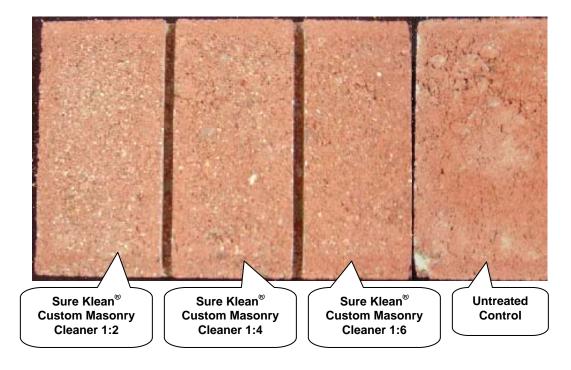




PROSOCO, Inc. Page 29

### **PHOTOGRAPHS – Limiting Surface Alterations**

### "#6 Red" Concrete Paver







PROSOCO, Inc. Page 30

### **CONCLUSIONS – Limiting Surface Alterations**

Test results indicate that all dilutions of Sure Klean<sup>®</sup> Custom Masonry Cleaner tested affected the submitted samples in a similar manner by removing slight to heavy amounts of surface pigment from the submitted concrete pavers. To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations, clean within 3 days of construction.

#### **RECOMMENDED PRODUCTS AND DILUTIONS - CLEANING**

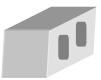
Recommendations for new construction cleaning for each type of concrete paver submitted by Gagne & Son Concrete Block, Belgrade, ME, are provided in the chart below.

Sample	Limiting Surface Alterations
All Submitted Concrete Pavers	Sure Klean <sup>®</sup> Custom Masonry Cleaner (1:2) OR (1:4) OR (1:6)

The most appropriate cleaner and dilution should be determined on the specific job-site, and will be dependent primarily on the nature and severity of soiling present at that location. Pressure rinsing equipment providing at least 400 psi at 4-6 gpm delivered though a 15-40 degree fan spray often produces best cleaning results.

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate cleaning product and procedures for a particular project. See product literature for additional application and product information.





PROSOCO, Inc. Page 31

#### **SECTION D - PROTECTIVE WATER REPELLENTS:**

The testing described below evaluates the suitability of water repellent treatments.

The surface treatments evaluated were selected for their suitability for application based on the following selection criteria:

- 1. Weatherproofing properties
- 2. Color change
- 3. Ease of application

### **DESCRIPTIONS OF PRODUCTS EVALUATED – Protective Water Repellents:**

**Sure Klean® Weather Seal Blok-Guard® and Graffiti Control** – A clear, solvent-based silicone elastomer formulated to weatherproof custom masonry units, cast stone, architectural concrete block, precast concrete, wood and porous masonry. Weather Seal Blok-Guard® and Graffiti Control penetrates and fills pores to prevent water penetration through exterior walls exposed to normal weathering.

**Sure Klean® Weather Seal Siloxane WB Concentrate** – A concentrated water repellent designed for dilution with fresh water at the jobsite. This solvent-free blend of siloxanes and oligomeric alkoxysiloxanes mixes easily with water to produce a penetrating water repellent ideal for application to dense or porous masonry surfaces. An effective alternative to conventional solvent-based silanes or siloxanes, Siloxane WB penetrates and chemically bonds deep within the masonry substrate to provide long-lasting protection against water-related staining or deterioration. Will not darken, produce a surface film or impair the natural breathing characteristics of treated surfaces.

**Sure Klean® Paver Enhancer** - A solvent-based blend of high-quality siloxanes modified to provide excellent water repellency and color enhancement to interlocking concrete, fired clay, porous tile and many types of natural stone surfaces. Paver Enhancer penetrates and reacts with the surface to form a chemical bond, providing long-term durability, alkali resistance and superior breatheability.

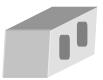
**Consolideck® Saltguard® WB** — A ready-to-use water-based, VOC compliant silane/siloxane water repellent and "chloride screen" for the protection of concrete and masonry surfaces. Saltguard® WB penetrates more deeply than conventional water- or solvent-based water repellents. Low odor and alkaline stable, Saltguard® WB is ideal for field or in-plant application to concrete and most masonry surfaces. Saltguard® WB protects horizontal and vertical surfaces from moisture intrusion and chemical attack of chloride salts.

**Stand Off**® **SLX100 Water & Oil Repellent -** Combines water and oil repellency on most substrates to prevent staining by waterborne and oily substances. This modified "neat" silane system offers invisible protection and low volatility. The small molecular structure of SLX100 allows for maximum penetration at coverage rates higher than that of conventional silanes. Depth of penetration is controlled by the application rate (loading rate). This makes SLX100 ideal for protecting granite and other dense, color-sensitive surfaces.

#### **SAMPLE PREPARATION – Protective Water Repellents:**

The submitted blocks were scored, allowed to dry, and reabsorb atmospheric humidity for 24 hours prior to treatment. The method of application for protective treatments followed the PROSOCO, Inc. 2004 Product Guide. All treatments were allowed to cure at least 3 days prior to testing.





PROSOCO, Inc. Page 32

### **TEST METHODS – Protective Water Repellents:**

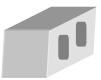
Water Absorption Tube Test: RILEM II.4, 60 mph, 20 Minutes

The water absorption tube test simulating wind driven rain conditions was performed. This test simulates 60 mile per hour wind driven rain conditions for a period of 20 minutes. See Technical Services TECH Note RILEM Tube Test Procedures.

#### **TEST RESULTS – Protective Water Repellents:**

	RES	ULTS
"#1" Split-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	59	mph
"#2" Split-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	60	mph
"#3" Split-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	60	mph
"#13" Split-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	60	mph
"#15" Split-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	60	mph
"#16" Split-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	60	mph



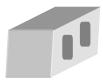


PROSOCO, Inc. Page 33

### **TEST RESULTS – Protective Water Repellents:**

	RESULTS
"4/F" Split-face CMU	
Untreated Control	<40 mph
Blok-Guard® and Graffiti Control	60 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph
"6P" Split-face CMU	
Untreated Control	<40 mph
Blok-Guard® and Graffiti Control	60 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	59 mph
"7G" Split-face CMU	
Untreated Control	<40 mph
Blok-Guard® and Graffiti Control	60 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph
"8D" Split-face CMU	
Untreated Control	<40 mph
Blok-Guard <sup>®</sup> and Graffiti Control	60 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph
"9E" Split-face CMU	
Untreated Control	45 mph
Blok-Guard® and Graffiti Control	60 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph
"11C" Split-face CMU	
Untreated Control	<40 mph
Blok-Guard® and Graffiti Control	60 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	59 mph
"12A" Split-face CMU	
Untreated Control	56 mph
Blok-Guard <sup>®</sup> and Graffiti Control	60 mph
Siloxane WB 1:9	60 mph
Siloxane WB 1:14	60 mph



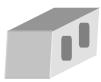


PROSOCO, Inc. Page 34

### **TEST RESULTS – Protective Water Repellents:**

	RESU	JLTS
"Natural" Split-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	60	mph
"#14" Smooth-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	60	mph
"#67" Smooth-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	60	mph
"Regular" Smooth-face CMU		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	60	mph
Siloxane WB 1:9	60	mph
Siloxane WB 1:14	60	mph
"#16 Brown" Split-face KMUC		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	59	mph
"#16 Charcoal" Split-face KMUC		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	59	mph
"#16 Natural" Split-face KMUC		
Untreated Control	<40	mph
Blok-Guard® and Graffiti Control	59	mph
"#6 Beige" Concrete Paver		
Untreated Control	<40	mph
Paver Enhancer	60	mph
Saltguard <sup>®</sup> WB	<40	mph
SLX100 Water & Oil Repellent	60	mph





PROSOCO, Inc. Page 35

### **TEST RESULTS – Protective Water Repellents:**

	RESULTS
"#6 Beige & Black" Concrete Paver	
Untreated Control	<40 mph
Paver Enhancer	60 mph
Saltguard <sup>®</sup> WB	60 mph
SLX100 Water & Oil Repellent	60 mph
"#6 Charcoal" Concrete Paver	
Untreated Control	<40 mph
Paver Enhancer	60 mph
Saltguard <sup>®</sup> WB	<40 mph
SLX100 Water & Oil Repellent	60 mph
"#6 Natural" Concrete Paver	
Untreated Control	<40 mph
Paver Enhancer	60 mph
Saltguard <sup>®</sup> WB	<40 mph
SLX100 Water & Oil Repellent	60 mph
"#6 Red" Concrete Paver	
Untreated Control	<40 mph
Paver Enhancer	60 mph
Saltguard <sup>®</sup> WB	<40 mph
SLX100 Water & Oil Repellent	60 mph
"#6 Sandhill" Concrete Paver	
Untreated Control	<40 mph
Paver Enhancer	60 mph
Saltguard <sup>®</sup> WB	<40 mph
SLX100 Water & Oil Repellent	60 mph

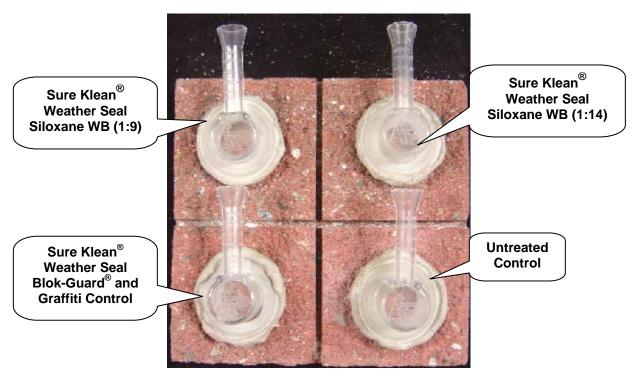




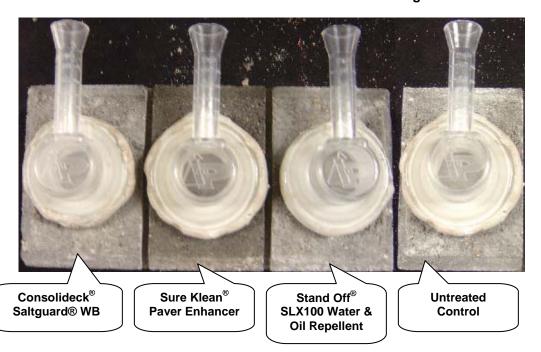
PROSOCO, Inc. Page 36

### **PHOTOGRAPHS- Protective Water Repellents**

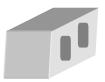
"#15" Split-face CMU- RILEM Testing



"#6 Charcoal" Concrete Paver - RILEM Testing







PROSOCO, Inc. Page 37

### **CONCLUSIONS - Protective Water Repellents**

Based upon laboratory evaluations, Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> and Graffiti Control and Sure Klean<sup>®</sup> Weather Seal Siloxane WB Concentrate diluted with nine and fourteen parts water provided excellent water repellency to all of the submitted CMU's. In addition, Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> and Graffiti Control enhanced the appearance of each CMU.

Sure Klean® Weather Seal Blok-Guard® and Graffiti Control provided excellent water repellency to all of the submitted KMUC's. In addition, Sure Klean® Weather Seal Blok-Guard® and Graffiti Control enhanced the appearance of each KMUC.

Sure Klean® Paver Enhancer and Stand Off® SLX100 Water & Oil Repellent provided excellent water repellency to all of the submitted concrete pavers. Consolideck® Saltguard® WB provided excellent water repellency to the "#6 Beige & Black" concrete paver. In addition, Sure Klean® Paver Enhancer enhanced the natural appearance of each concrete paver.

#### **RECOMMENDATIONS - PROTECTIVE WATER REPELLENTS**

Recommendations for water repellency treatment for each type of CMU, KMUC, and concrete paver submitted by Gagne & Son Concrete Block, Belgrade, ME, are provided in the chart below. Recommendations are based on the treatment that proved most effective and can provide water repellency on all types submitted.

Block Type	Product
All Submitted CMU's	Sure Klean <sup>®</sup> Weather Seal Blok-Guard <sup>®</sup> and Graffiti Control OR Sure Klean <sup>®</sup> Weather Seal Siloxane WB Concentrate (1:9) OR (1:14)
All Submitted KMUC's	Sure Klean <sup>®</sup> Weather Seal Blok-Guard <sup>®</sup> and Graffiti Control
"#6 Beige & Black" Concrete Paver	Sure Klean <sup>®</sup> Paver Enhancer OR Consolideck <sup>®</sup> Saltguard <sup>®</sup> WB OR Stand Off <sup>®</sup> SLX100 Water & Oil Repellent
"#6 Beige" Concrete Paver "#6 Charcoal" Concrete Paver "#6 Natural" Concrete Paver "#6 Red" Concrete Paver "#6 Sandhill" Concrete Paver	Sure Klean <sup>®</sup> Paver Enhancer OR Stand Off <sup>®</sup> SLX100 Water & Oil Repellent

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate water repellent product and procedures for a particular project. See product literature for additional application and product information.





PROSOCO, Inc. Page 38

### SECTION E - GRAFFITI CONTROL

### **DESCRIPTION OF PRODUCTS EVALUATED**

These trials were conducted to determine the optimal graffiti control treatment.

#### **Graffiti Control Treatments**

**Sure Klean® Weather Seal Blok-Guard® and Graffiti Control** – A clear, solvent-based silicone elastomer formulated to weatherproof concrete block and other porous masonry material. Sure Klean® Weather Seal Blok-Guard® and Graffiti Control protects masonry surfaces from repeated graffiti attacks without altering the natural appearance.

### **Products Evaluated for Graffiti Removal**

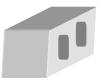
**Defacer Eraser® Graffiti Wipe** – An easy-to-use graffiti remover that does not contain methanol, methylene chloride or other "halogenated" solvents prohibited on many projects. Graffiti Wipe removes a variety of graffiti stains from most smooth masonry, wood and metal surfaces.

**Sure Klean® Fast Acting Stripper** – A thixotropic stripping compound formulated specifically for removal of high strength paints and coatings such as epoxies, polyurethanes, and floor enamels. Additionally, Fast Acting Stripper dissolves most spray paints, marking pens, lacquers and other graffiti.

### **Graffiti Agents**

Interior/Exterior Spray Paint (Red) Permanent Marker (Green) Permanent Marker (Red) Permanent Marker (Black)





PROSOCO, Inc. Page 39

#### SAMPLE PREPARATION - Graffiti Control

This evaluation compares the effectiveness in preventing staining of enamel spray paint and permanent markers.

Sections of the concrete samples were treated with one coat of Sure Klean<sup>®</sup> Weather Seal Blok-Guard® and Graffiti Control, in accordance with PROSOCO, Inc.'s Product Guide application instructions and then allowed to cure for at least one day. At the end of the one-day cure period, a visual adverse effects evaluation was made and then the graffiti agents were applied to the substrates.

Spray paint and markers were applied as graffiti agents to all treated surfaces no sooner than one day following application of Sure Klean® Weather Seal Blok-Guard® and Graffiti Control. Removal of the graffiti agents was attempted 24 hours after application of the graffiti agents, using Defacer Eraser® Graffiti Wipe and Sure Klean® Fast Acting Stripper.

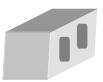
#### **TEST METHOD – Graffiti Control**

Chemical cleaners were evaluated using the following procedure:

- 1. Apply the product to a dry surface, soiled with graffiti.
- 2. Allow appropriate dwell time:

- 3. Pressure rinse thoroughly until water runs clear. \*
- 4. Allow the surface to dry thoroughly and visually examine to determine effectiveness.
- \* Pressure rinsing was conducted at approximately 1300 psi with a warm water flow rate of 1.9 gallons per minute.



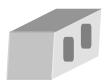


PROSOCO, Inc. Page 40

## **TEST RESULTS - Graffiti Control**

	"#	1" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	75%	100%	90%	90%	89%
Graffiti Wipe	75%	90%	95%	95%	89%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	100%	100%	99%
Graffiti Wipe	95%	100%	100%	100%	99%
	"#	2" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	70%	95%	20%	50%	59%
Graffiti Wipe	70%	20%	20%	50%	40%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	95%	95%	94%
Graffiti Wipe	85%	100%	95%	95%	94%
	"#	3" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	90%	40%	60%	70%
Graffiti Wipe	70%	50%	40%	60%	55%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	100%	100%
Graffiti Wipe	100%	100%	100%	100%	100%
	"#1	3" Split-face C	CMU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	60%	95%	70%	70%	74%
Graffiti Wipe	60%	80%	70%	70%	70%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	100%	100%	98%
Graffiti Wipe	95%	100%	100%	100%	99%
	"#1	5" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	60%	100%	90%	95%	86%
Graffiti Wipe	60%	100%	95%	100%	89%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	100%	100%	98%
Graffiti Wipe	90%	100%	100%	100%	98%





PROSOCO, Inc. Page 41

## **TEST RESULTS - Graffiti Control**

	"#1	6" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	80%	100%	90%	100%	93%
Graffiti Wipe	80%	90%	90%	100%	90%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	100%	100%
Graffiti Wipe	85%	100%	100%	100%	96%
	"4/	F" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	50%	95%	20%	60%	56%
Graffiti Wipe	50%	50%	20%	60%	45%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	90%	95%	95%
Graffiti Wipe	95%	100%	90%	90%	94%
	"6	P" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	95%	90%	95%	93%
Graffiti Wipe	40%	20%	85%	95%	60%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	99%	100%	100%	100%	100%
Graffiti Wipe	99%	100%	100%	100%	100%
	"70	G" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	70%	95%	85%	80%	83%
Graffiti Wipe	60%	80%	75%	80%	74%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	100%	100%	100%	96%
Graffiti Wipe	85%	100%	100%	100%	96%
	"8l	D" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	70%	100%	100%	95%	91%
Graffiti Wipe	40%	100%	90%	95%	81%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	100%	100%	99%
Graffiti Wipe	95%	100%	100%	100%	99%



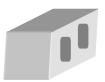


PROSOCO, Inc. Page 42

## **TEST RESULTS - Graffiti Control**

	"9	E" Split-face C	MU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	70%	95%	90%	90%	86%
Graffiti Wipe	20%	40%	70%	90%	55%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	100%	100%
Graffiti Wipe	100%	100%	100%	100%	100%
	"11	C" Split-face C	CMU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	50%	100%	90%	90%	83%
Graffiti Wipe	60%	80%	90%	90%	80%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	100%	100%
Graffiti Wipe	90%	100%	100%	100%	98%
	"12	A" Split-face C	CMU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	50%	95%	90%	95%	83%
Graffiti Wipe	50%	90%	90%	95%	81%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	95%	100%	100%	100%	99%
Graffiti Wipe	90%	100%	100%	100%	98%
	"Natı	ural" Split-face	CMU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	50%	95%	40%	50%	59%
Graffiti Wipe	50%	20%	40%	50%	40%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	95%	95%	95%
Graffiti Wipe	85%	100%	95%	95%	94%
	"#14	" Smooth-face	CMU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	95%	95%	95%	93%
Graffiti Wipe	85%	50%	95%	95%	81%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	95%	95%	98%
Graffiti Wipe	100%	100%	95%	95%	98%

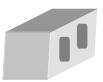




PROSOCO, Inc. Page 43

## **TEST RESULTS - Graffiti Control**

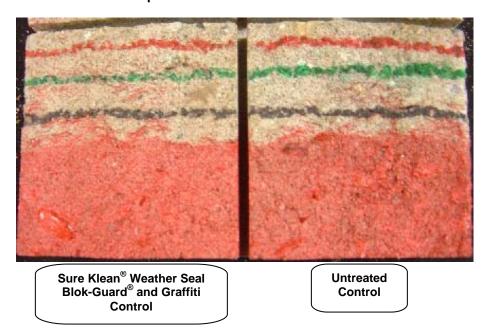
	"#67	" Smooth-face	CMU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	90%	100%	95%
Graffiti Wipe	90%	100%	90%	100%	95%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	100%	100%
Graffiti Wipe	100%	100%	100%	100%	100%
	"Regul	ar" Smooth-fa	ce CMU		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	85%	95%	50%	50%	70%
Graffiti Wipe	85%	50%	50%	50%	59%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	100%	90%	95%	94%
Graffiti Wipe	100%	95%	90%	95%	95%
	"#16 Br	own" Split-fac	e KMUC		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	50%	95%	70%	90%	76%
Graffiti Wipe	50%	90%	70%	90%	75%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	100%	100%
Graffiti Wipe	100%	100%	100%	100%	100%
	"#16 Cha	arcoal" Split-fa	ce KMUC		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	50%	95%	80%	95%	80%
Graffiti Wipe	50%	50%	80%	95%	69%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	100%	100%
Graffiti Wipe	100%	100%	100%	100%	100%
	"#16 Na	tural" Split-fac	e KMUC		
Untreated Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	90%	90%	60%	70%	78%
Graffiti Wipe	60%	20%	60%	70%	53%
Blok-Guard <sup>®</sup> and Graffiti Control	Red Paint	Black Marker	Green Marker	Red Marker	% Avg. Removal
Fast Acting Stripper	100%	100%	100%	100%	100%
Graffiti Wipe	100%	100%	100%	100%	100%



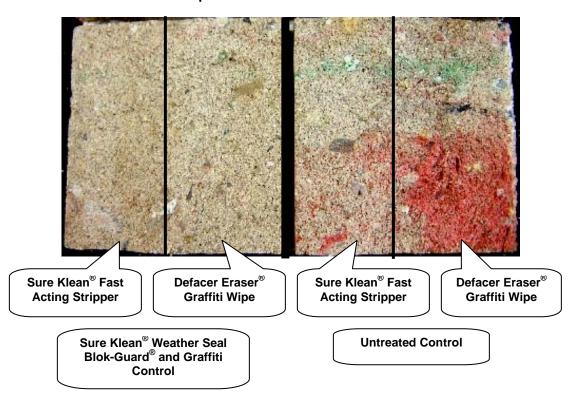
PROSOCO, Inc. Page 44

### **PHOTOGRAPHS – Graffiti Control**

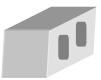
### "6P" Split-face CMU Before Graffiti Removal



## "6P" Split-face CMU After Graffiti Removal







PROSOCO, Inc. Page 45

#### **CONCLUSIONS – Graffiti Control**

Based upon laboratory evaluations, graffiti removal was improved when the submitted samples were treated with Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> and Graffiti Control prior to graffiti application. In addition, Sure Klean<sup>®</sup> Weather Seal Blok-Guard<sup>®</sup> and Graffiti Control enhanced the appearance of the CMU's and KMUC's.

### **RECOMMENDATIONS – GRAFFITI CONTROL**

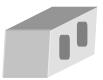
Recommendations for graffiti control treatment for each type of CMU and KMUC submitted by Gagne & Son Concrete Block, Belgrade, ME, are provided in the chart below. Recommendations are based on the treatment that proved most effective for providing graffiti repellency and the product that was most effective at removing the graffiti on all types submitted.

Block Type	Graffiti Repellent	Graffiti Removers
All Submitted CMU's and KMUC's	Sure Klean <sup>®</sup> Weather Seal Blok- Guard <sup>®</sup> and Graffiti Control	Sure Klean <sup>®</sup> Fast Acting Stripper OR Defacer Eraser <sup>®</sup> Graffiti Wipe

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. Because the severity of graffiti varies from location to location, on-site testing should be conducted to determine the most appropriate graffiti control product and procedure for a particular project.

For the most severe graffiti cases Sure Klean<sup>®</sup> Fast Acting Stripper is recommended for job-site testing. For mild graffiti cases, Defacer Eraser<sup>®</sup> Graffiti Wipe is recommended for job-site testing. See product literature for additional application and product information.





**Temperature:** 

PROSOCO, Inc. Page 46

### **SECTION F - STAIN REPELLENCY**

Kitchen Products Evaluated:

These trials were conducted to determine the effectiveness of treatments in preventing food, oil, and miscellaneous staining on the submitted concrete pavers.

#### **DESCRIPTION OF PRODUCTS EVALUATED - Stain Protection:**

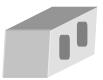
**Stand Off® SLX100 Water & Oil Repellent -** Combines water and oil repellency on most substrates to prevent staining by waterborne and oily substances. This modified "neat" silane system offers invisible protection and low volatility. The small molecular structure of SLX100 allows for maximum penetration at coverage rates higher than that of conventional silanes. Depth of penetration is controlled by the application rate (loading rate). This makes SLX100 ideal for protecting granite and other dense, color-sensitive surfaces.

	<del></del> -
Coca Cola	ambient (~70°F)
Ketchup	ambient (~70°F)
Mustard	ambient (~70°F)
Red wine	ambient (~70°F)
Balsamic Vinegar	ambient (~70°F)
Soy Sauce	ambient (~70°F)
Olive Oil	ambient (~70°F)
Wesson Oil	(~250°F)
Coffee	(~120°F)

### **SAMPLE PREPARATION – Stain Repellency**

Samples were cleaned with Enviro Klean<sup>®</sup> 2010 All Surface Cleaner diluted with 10 parts water, allowed to dry and absorb atmospheric moisture for 24 hours prior to treatment. The method of application for the protective treatment consisted of a single, saturating application.





PROSOCO, Inc. Page 47

## TEST METHOD – Stain Repellency

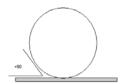
### **Surface Beading Evaluation**

The food and oil products were applied to the test areas by using a dropper creating a bead  $0.5-1.0\,\mathrm{cm}$  in diameter. The beading properties of the oils and liquids were visually evaluated within two minutes after application. The results are reported as a rating based on the angle of contact between the base of the droplet and the substrate. A rating of "1 or 2" indicated the smallest angle of contact (<90°) which correlates to "above average" repellency. A rating of "3 or 4" indicates "average" repellency. A rating of "5 or greater" indicated that the liquid or oil quickly absorbed into the substrate and correlates to "below average" repellency.

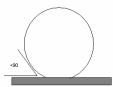
Note: Non-free flowing staining agents such as ketchup and mustard are applied in a globule and not evaluated for their beading properties.

Rating System (1-5)

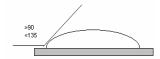
1. No wetting of contact area (no darkening); angle less than 90°



2. Wetting contained to the contact area (slight darkening); angle is less than 90°



3. Wetting contained to the contact area (slight darkening); angle is greater than 90°, but less than 135°.



4. Wetting beyond the contact area (darkening); angle is greater than 135°



5. Wetting beyond the contact area (darkening); angle is flat.



### Stain Removal Evaluation

The soiling agents were allowed to dwell on the treated and untreated substrates for times of 24 hours, 4 hours, 1 hour, and 10 minutes. The test areas were then cleaned with Enviro Klean<sup>®</sup> 2010 All Surface Cleaner diluted 1 part concentrate to 10 parts fresh water and scrubbed under a stream of running water from a faucet. Samples were allowed to dry for 24 hours. Evaluation consisted of a visual examination of the tested areas to determine the percentage of staining removal.





PROSOCO, Inc. Page 48

## TEST RESULTS - Surface Beading

		1	"#6 Beige'	' Concre	te Paver				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5			5	5	5	5	5	5
SLX100	2			2	2	2	2	2	2
		"#6 I	Beige & Bl	ack" Cor	ncrete Pave	er	1		
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5			5	5	5	5	5	5
SLX100	2			2	2	2	2	2	2
		"#	6 Charcoa	l" Concr	ete Paver				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5			5	5	5	5	5	5
SLX100	2			2	2	2	2	2	2
		"	#6 Natural	" Concre	te Paver				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5			5	5	5	5	5	5
SLX100	2			2	2	2	2	2	2
			"#6 Red"	Concrete	Paver				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5			5	5	5	5	5	5
SLX100	2			2	2	2	2	2	2
		";	#6 Sandhil	l" Concr	ete Paver				
	Coco- Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
Untreated Control	5			5	5	5	5	5	5
SLX100	2			2	2	2	2	2	2





PROSOCO, Inc. Page 49

## **TEST RESULTS – Staining Removal**

% Removal

## "#6 Beige" Concrete Paver

	Untreate	ed Control							
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	70%	70%	70%	10%	10%	100%
4 hour	100%	100%*	20%*	70%	70%	70%	10%	10%	100%
1 hour	100%	100%*	100%*	70%	70%	70%	10%	10%	100%
10 min.	100%	100%*	100%*	70%	70%	70%	10%	10%	100%
	Stand C	Off <sup>®</sup> SLX10	0 Water & 0	Dil Repell	ent				
	Stand C Coca Cola	Off <sup>®</sup> SLX100	0 Water & 0 Mustard	Oil Repell Red Wine	ent Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	Coca			Red	Balsamic	_	Olive Oil		Hot Coffee
24 hr 4 hour	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Sauce		Oil	
-	Coca Cola 100%	Ketchup	Mustard	Red Wine 100%	Balsamic Vinegar 90%*	<b>Sauce</b> 100%	80%	<b>Oil</b> 80%	100%

## "#6 Beige & Black" Concrete Paver

	Untreate	ed Control							
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	70%	70%	10%	10%	100%
4 hour	100%	100%*	100%*	100%	70%	70%	10%	10%	100%
1 hour	100%	100%*	100%*	100%	70%	70%	10%	10%	100%
10 min.	100%	100%*	100%*	100%	70%	70%	10%	10%	100%
	Stand C	Off <sup>®</sup> SLX10	0 Water & 0	Oil Repell	ent	·	I		l
	Stand C Coca Cola	Off <sup>®</sup> SLX100	0 Water & 0 Mustard	Oil Repell Red Wine	ent Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	Coca			Red	Balsamic	_	Olive Oil		Hot Coffee
24 hr 4 hour	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Sauce		Oil	
	Coca Cola 100%	Ketchup 100%	Mustard	Red Wine 100%	Balsamic Vinegar 100%	Sauce 100%	70%	<b>Oil</b> 70%	100%

<sup>\*</sup> Indicates etching occurred due to the acidic nature of the staining agents.





PROSOCO, Inc. Page 50

## **TEST RESULTS – Staining Removal**

% Removal

## "#6 Charcoal" Concrete Paver

	Untreate	ed Control							
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	100%	100%	10%	10%	100%
4 hour	100%	80%*	80%*	100%	100%	100%	10%	10%	100%
1 hour	100%	90%*	90%*	100%	100%	100%	10%	10%	100%
10 min.	100%	90%*	90%*	100%	100%	100%	10%	10%	100%
	Stand C	Off <sup>®</sup> SLX10	0 Water & 0	Dil Repell	ent				
	Stand C Coca Cola	Off <sup>®</sup> SLX10	0 Water & 0 Mustard	Oil Repell Red Wine	ent Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	Coca			Red	Balsamic	-	Olive Oil		Hot Coffee
24 hr 4 hour	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Sauce		Oil	
	Coca Cola 100%	Ketchup 100%	Mustard	Red Wine 100%	Balsamic Vinegar 100%	Sauce 100%	80%	<b>Oil</b> 80%	100%

### "#6 Natural" Concrete Paver

	Untreate	ed Control							
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	100%*	10%	10%	10%*	10%	10%	10%	100%
4 hour	100%	100%*	30%	10%	10%*	10%	10%	10%	100%
1 hour	100%	100%*	100%*	10%	10%*	10%	10%	10%	100%
10 min.	100%	100%*	100%*	10%	10%*	10%	10%	10%	100%
	Stand C	Off <sup>®</sup> SLX10	0 Water & 0	Oil Repell	ent	<u>'</u>			
	Stand C Coca Cola	Off <sup>®</sup> SLX100	0 Water & 0	Oil Repell Red Wine	ent Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	Coca			Red	Balsamic	_	Olive Oil		Hot Coffee
24 hr 4 hour	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Sauce		Oil	
	Coca Cola 100%	Ketchup 100%*	Mustard	Red Wine 90%	Balsamic Vinegar 90%*	Sauce 90%	85%	<b>Oil</b> 85%	100%

<sup>\*</sup> Indicates etching occurred due to the acidic nature of the staining agents.





PROSOCO, Inc. Page 51

## **TEST RESULTS – Staining Removal**

% Removal

## "#6 Red" Concrete Paver

	Untreate	ed Control							
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	10%	10%	10%	10%	10%	100%
4 hour	100%	100%*	100%*	10%	10%	10%	10%	10%	100%
1 hour	100%	100%*	100%*	10%	10%	10%	10%	10%	100%
10 min.	100%	100%*	100%*	10%	10%	10%	10%	10%	100%
	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent								
	Stariu	Off SLX10	0 Water & 0	Dil Repell	ent				
	Coca Cola	Ketchup	Mustard	Oil Repell Red Wine	ent Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	Coca			Red	Balsamic	_	Olive Oil		Hot Coffee
24 hr 4 hour	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Sauce		Oil	
	Coca Cola 100%	Ketchup 100%*	Mustard 100%*	Red Wine 100%	Balsamic Vinegar 100%*	Sauce 100%	90%	<b>Oil</b> 80%	100%

### "#6 Sandhill" Concrete Paver

		#0 Sandinii Concrete Pavei							
	Untreated Control								
	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	100%	10%	10%	100%	100%*	100%	10%	10%	100%
4 hour	100%	100%*	100%*	100%	100%*	100%	10%	10%	100%
1 hour	100%	100%*	100%*	100%	100%*	100%	10%	10%	100%
10 min.	100%	100%*	100%*	100%	100%*	100%	10%	10%	100%
	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent								
	Stand C	Off <sup>®</sup> SLX10	0 Water & 0	Oil Repell	ent	<u>'</u>			
	Stand C Coca Cola	Off <sup>®</sup> SLX100	0 Water & 0	Oil Repell Red Wine	ent Balsamic Vinegar	Soy Sauce	Olive Oil	Wesson Oil	Hot Coffee
24 hr	Coca			Red	Balsamic	_	Olive Oil		Hot Coffee
24 hr 4 hour	Coca Cola	Ketchup	Mustard	Red Wine	Balsamic Vinegar	Sauce		Oil	
	Coca Cola 100%	Ketchup 100%*	Mustard	Red Wine	Balsamic Vinegar 100%*	Sauce 100%	90%	<b>Oil</b> 90%	100%

<sup>\*</sup> Indicates etching occurred due to the acidic nature of the staining agents.





PROSOCO, Inc. Page 52

### **PHOTOGRAPHS- Stain Results**

"#6 Charcoal" Concrete Paver; Stains Applied



Stand Off<sup>®</sup>
SLX100 Water &
Oil Repellent

**Untreated Control** 

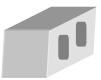
"#6 Charcoal" Concrete Paver; Stains Removed



Stand Off<sup>®</sup>
SLX100 Water &
Oil Repellent

**Untreated Control** 





PROSOCO, Inc. Page 53

### **CONCLUSIONS – Stain Repellency**

Based upon laboratory evaluations, Stand Off<sup>®</sup> SLX100 Water & Oil Repellent improved the surface beading of the submitted concrete pavers. In addition, Stand Off<sup>®</sup> SLX100 Water & Oil Repellent was effective in repelling the staining agents from the submitted concrete pavers.

### **RECOMMENDATIONS – Stain Repellency**

Recommendations for stain resistance treatment for each type of concrete paver submitted by Gagne and Son Concrete Block, Belgrade, ME, are provided in the charts below. Recommendations are based on the treatments that proved most effective for providing stain repellency on all of the submitted concrete pavers.

Sample	Stain Repellent	Maintenance Cleaner
All Submitted Concrete Pavers	Stand Off <sup>®</sup> SLX100 Water & Oil Repellent	Enviro Klean <sup>®</sup> 2010 All Surface Cleaner (1:10)

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate product and procedures for a particular project. See product literature for additional application and product information.





PROSOCO, Inc. Page 54

## **SECTION G – COLOR ENHANCEMENT:**

## **DESCRIPTION OF PRODUCTS EVALUATED – Color Enhancement:**

**Sure Klean® Paver Enhancer** – A solvent-based blend of high-quality siloxanes modified to provide excellent water repellency and color enhancement to interlocking concrete, fired clay, porous tile and many types of natural stone surfaces. Paver Enhancer penetrates and reacts with the surface to form a chemical bond, providing long-term durability, alkali resistance and superior breatheability.

### **TEST METHOD - COLOR ENHANCEMENT**

Sure Klean<sup>®</sup> Paver Enhancer was applied in a single saturating application to the submitted concrete pavers. After 24 hours, a visual observation was made, comparing the treated sample to the untreated sample.





PROSOCO, Inc. Page 55

### **TEST RESULTS- COLOR ENHANCEMENT**

Paver Name	Sure Klean <sup>®</sup> Paver Enhancer
"#6 Beige"	3
"#6 Beige & Black"	2
"#6 Charcoal"	3
"#6 Natural"	3
"#6 Red"	3
"#6 Sandhill"	2

Scale: 0- No enhancement; dull

1- Slight Enhancement

2- Moderate Enhancement

3- Significant Enhancement

### **PHOTOGRAPH – Color Enhancement**

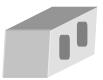
"#6 Charcoal" Concrete Paver



Untreated Control

Sure Klean<sup>®</sup>
Paver Enhancer





PROSOCO, Inc. Page 56

#### **RECOMMENDATIONS – Color Enhancement**

Recommendations for color enhancement for each type of concrete paver submitted by Gagne & Son Concrete Block, Belgrade, ME, are provided in the chart below. Recommendations are based on the treatment that proved most effective in providing color enhancement to the samples.

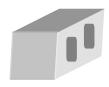
Substrate	Color Enhancer
All Submitted Concrete Pavers	Sure Klean <sup>®</sup> Paver Enhancer

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate product and procedures for a particular project. See product literature for additional application and product information.

Christopher A. Moore

Project Testing Laboratory Technician

CAM



## Laboratory Report

## **Pallet Tag Program Evaluation**

# **Gagne & Son Concrete Block Belgrade, ME**

Project No. 0409-08 PTP

Prepared For:

Gagne & Son Concrete Block 28 Old Rte. 27 Rd. Belgrade, ME 04917

Prepared By:



PROSOCO, Inc. January 2005